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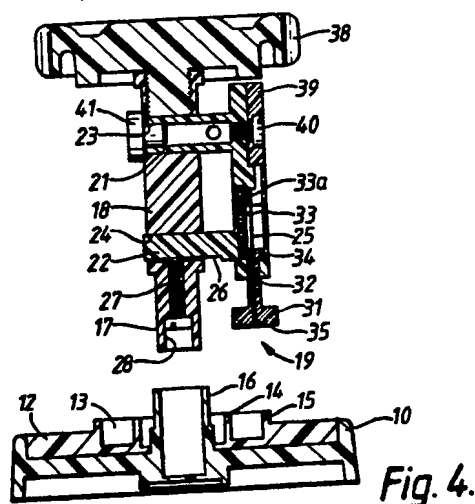
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## (54) Flange cutter

(57) A flange cutter for precise cutting of circular holes in laminar articles, in particular stoma adhesive seals, comprises a base member 10 for supporting the laminar article and having an upstanding cylindrical portion 16 which extends through the hole (2, Fig 1) in the seal and which engages a separable cutting device 19 comprising a cutter support 18. The cutter support carries an offset blade holder which has a foot 31 formed with a slot 32 sized to allow passage therethrough of a blade 25. The foot 31 is retractably connected to the blade holder via a compression spring 33. Downward travel of the foot 31 in association with the blade holder is limited by the flange, causing compression of the spring on further downward travel of the blade holder so that the blade projects from the slot and penetrates the flange. Relative rotation between the flange and the blade, preferably by rotating the knob 38, can achieve a circular cut. The radius of the circle is variable by adjustment of the arms 21, 22. An alternative construction with an elongate narrow base (110, Fig 9) can be used on a stoma seal incorporated in a bag (55 Fig 5) by inserting the base through the initial hole (56) in the seal.



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1/5

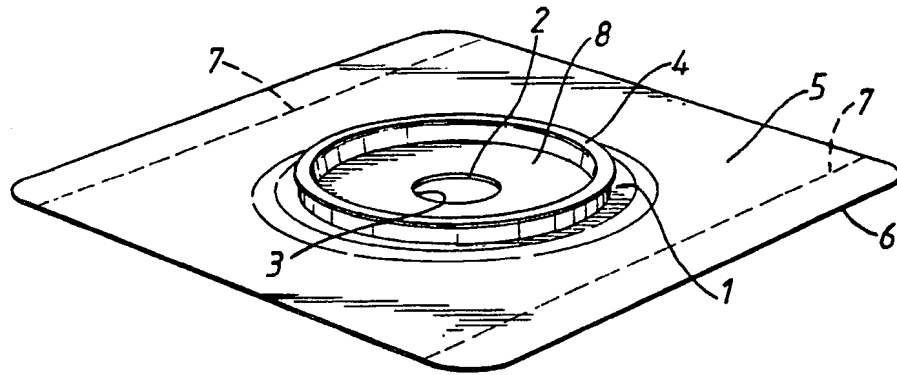


Fig. 1.

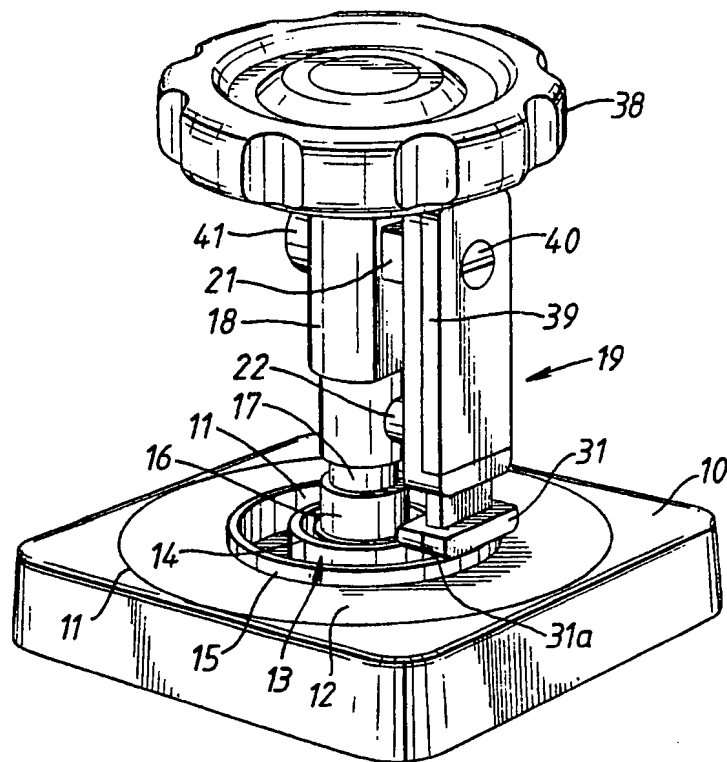
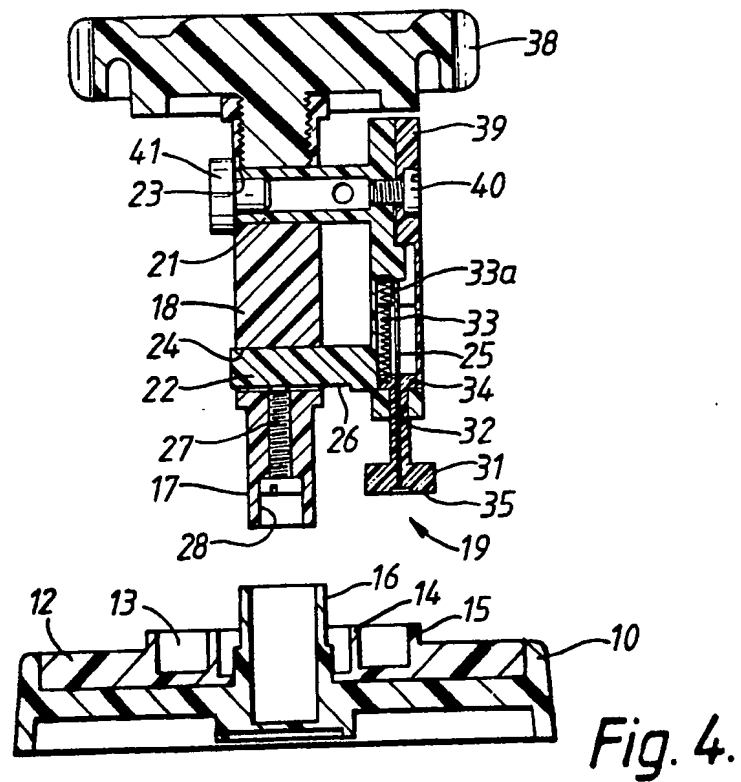
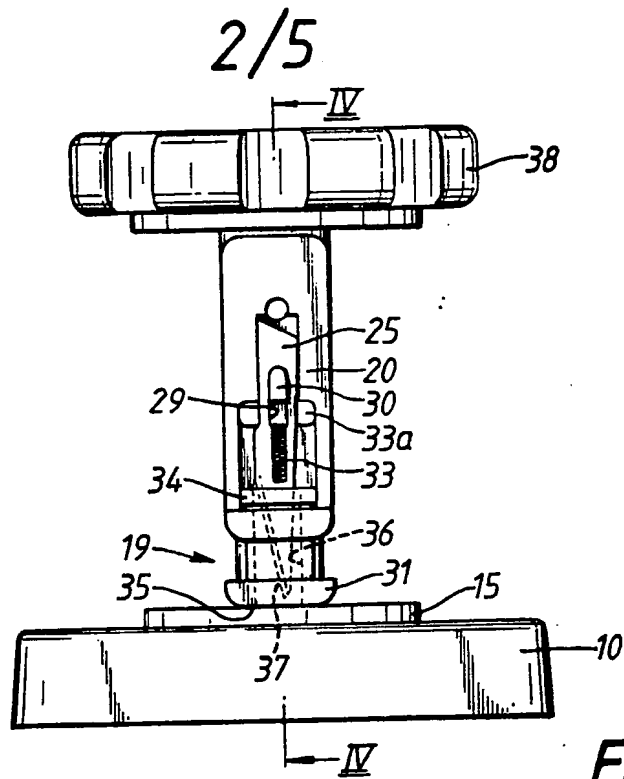


Fig. 2.



3/5

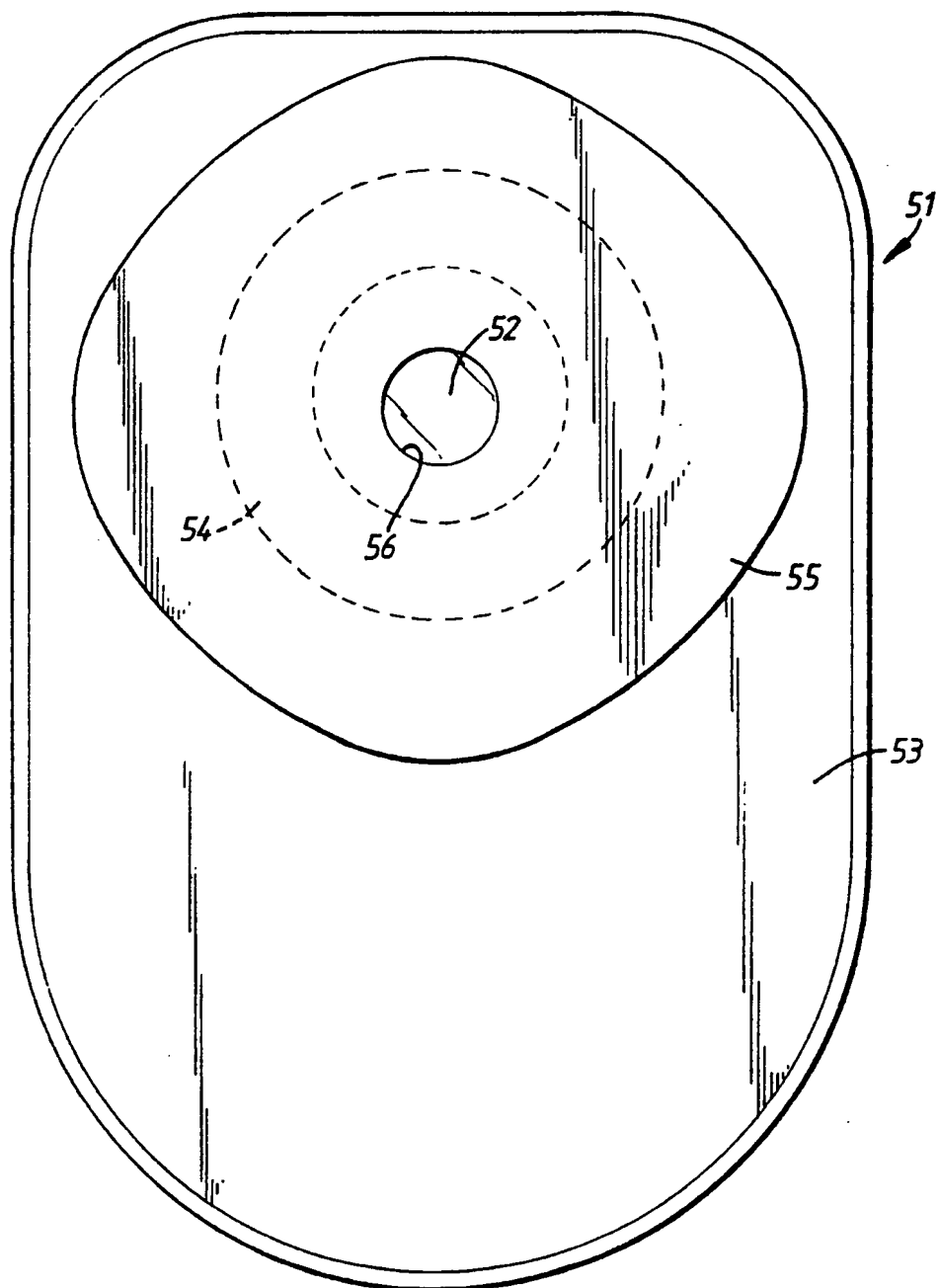


Fig.5.

4/5

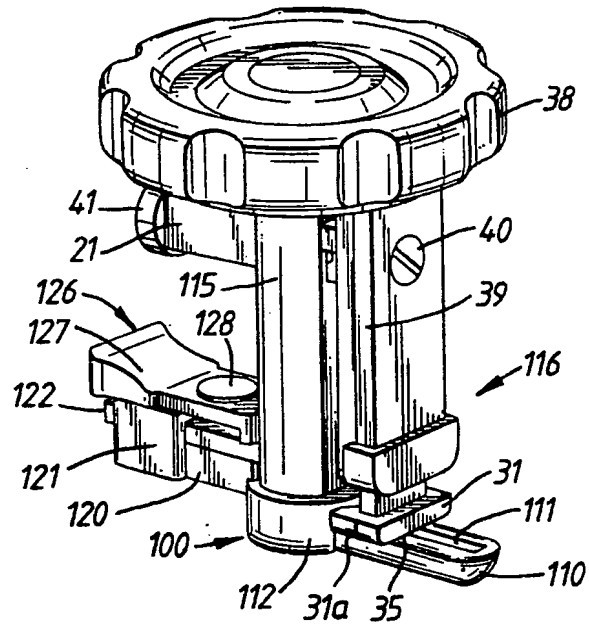


Fig. 6.

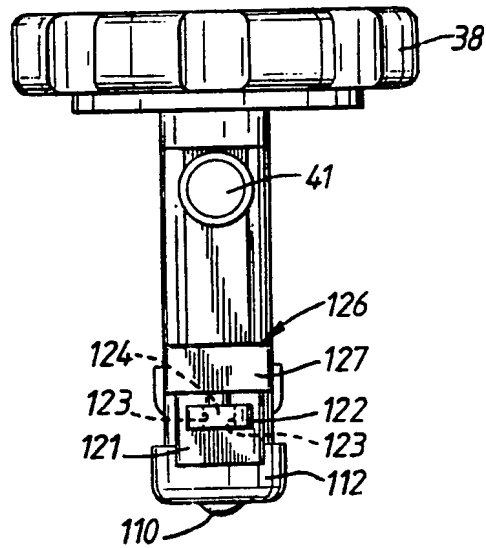


Fig. 7.

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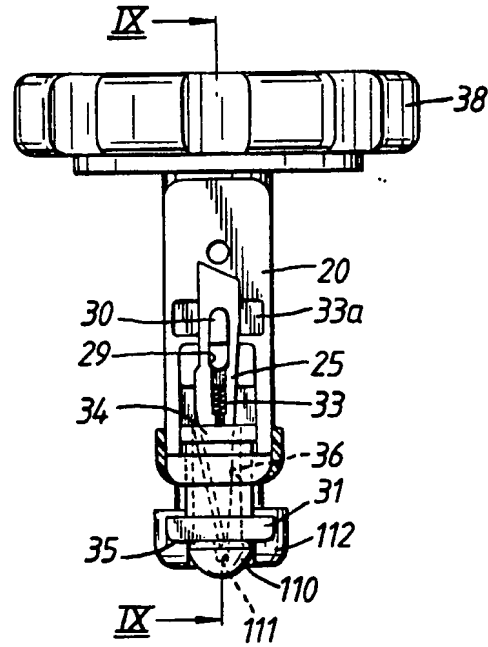


Fig. 8.

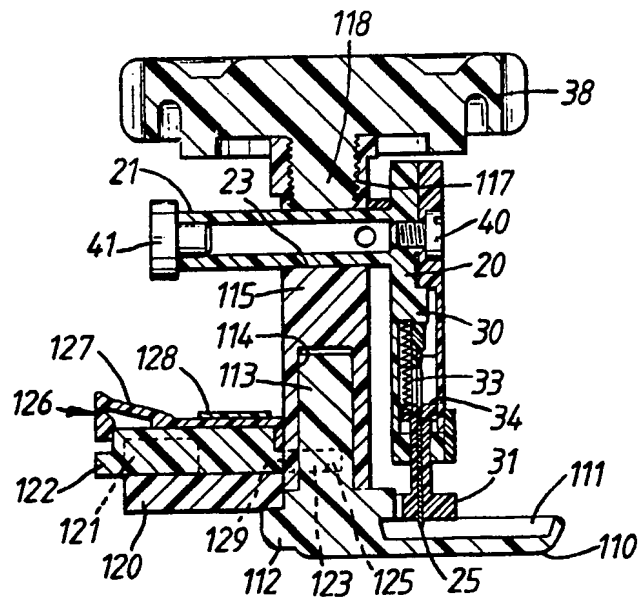


Fig. 9.

FLANGE CUTTER

This invention relates to flange cutters and in particular but not exclusively to a stoma adhesive seal hole cutter for emplacement on the body around a stoma and attachment of a flexible waterproof bag thereto.

As a result of illness and attendant surgery, it is necessary for many people to evacuate matter from the intestine or bladder through a stoma into a flexible waterproof bag fixed thereover. The mounting of the receptacle is generally effected via a flange which is placed over and around the stoma to adhere to the body and which is formed with a coupling ring over which the receptacle is fitted with the aim of achieving as reliable a fit as possible thereby to avoid seepage. Seepage will also occur as a result of unsatisfactory provision of the flange itself. Adhesion to the skin should be as intimate as possible and generally requires, if appropriate, regular shaving of the skin. Moreover, the flange must have an opening corresponding in shape and size to that of the stoma so that all matter will pass directly into the flexible bag. Stomas may vary considerably in size and are often irregular. Stoma flanges are generally made in a range of sizes according to the intended range of sizes of stoma with which they can be used. The flange itself is generally always the same size but flanges differ according to the diameter of coupling ring with the maximum size of stoma for which a particular flange may be used being several millimetres smaller than the coupling ring diameter or the appropriate flange size. Thus a 32 mm flange can be used for stomas up to 28 mm, a 38 mm flange can be used for stomas up to 35 mm etc. The coupling ring itself is formed on a soft plastics disc to which the flange itself adheres. This plastics material of the flange is relatively thin and it is necessary for the patient to have an aperture formed in

the disc of appropriate size which is matched to the shape and size of his stoma. This is generally carried out by cutting by use of scissors or even by use of a suitably sharp knife blade. However such cutting is  
5 difficult to carry out accurately, particularly because many patients are elderly and have poor eyesight or lack the control to cut accurately a relatively small sized opening.

It is for this reason that there have become  
10 available in recent years devices designed to assist the patient needing to tailor a stoma flange to his own stoma. One such device which is described in GB-A-2155839 is a simple die cutter having a steel body or shank on one end of which there is hardened cutting  
15 edge which is guided into the required cutting position on the flange by a shoulder on the shank. This device requires the exertion of substantial pressure while twisting in achieving a satisfactory cut and is likely to prove to be beyond the skill of many elderly  
20 persons. Moreover its use is limited to the production of circular openings of one set diameter.

Other devices which might conceivably be used as such or when modified for the production of stoma holes in the plastics discs of stoma flanges are generally of  
25 the hand punching type such as described in GB-A-620272 or the rotary cutter type as described in GB-A-618008 and GB-A-499300. These are generally relatively complicated devices which are restricted to the production of one size of hole of generally circular  
30 form. Moreover such devices are not specifically designed for use in the production of openings in stoma flanges where it is necessary to cut particularly soft plastics material which will readily adhere to cutting edges and surfaces.

35 Also known are one-piece devices wherein the flexible waterproof bag has the flange adhesively



mounted thereto, there being formed a generally circular opening extending through the flange and one face of the bag. The face of the flange remote from the bag is coated with adhesive and is covered with a peelable protective layer, generally of paper or card. Removal of the paper covering effectively renders the bag ready for emplacement over the stoma. However it is necessary initially to tailor the opening in the flange and the underlying face of the bag to the size of stoma of the patient. This is generally done with a pair of scissors. However it should be appreciated that the starter hole is generally dimensioned in the range of from 10 to 15 mm diameter and the enlargement of such holes to say up to 60 mm using a pair of scissors can cause difficulties often resulting in bags being spoiled or at least irregularly shaped holes not particularly well matched to the stoma being cut. The cutting is a particular difficulty with patients having poor eyesight or arthritis or the like making it difficult for them to cut the desired hole. The main benefit of such bags lies in the universality of them whereby a single bag can typically serve patients having stomas requiring cut openings say in the range of from 15 to 60 mm.

It is an object of this invention to provide a flange cutter for cutting circular openings of variable diameter within a predetermined range of diameters.

According to one aspect of the present invention, there is provided a flange cutter comprising a base member formed with a channel therein and having an upstanding cylindrical portion, and a cutting device comprising a cutter support adapted to engage said upstanding cylindrical portion and surmounted by a handling portion and carrying a blade holder off-set in relation thereto, the blade holder carrying at the base thereof a foot for emplacement over a surface of a

flange placed, in use, on the base, the foot being formed with a slot sized to allow passage therethrough of the blade, and being retractably connected to the blade holder via a compression spring, with the  
5 downward travel of the foot in association with the blade holder being limited by the flange with which it makes contact and further such travel being prevented by the compression of the spring so that the foot lies over the surface of the flange when the blade has  
10 continued its downward travel to penetrate the flange whereby relative rotational motion between flange and blade achieves a circular cut through the flange by the blade, which cut is centered at the axis of said cylindrical portion.

15 In one preferred embodiment of the invention, the cutter support is rotatable in relation to said central cylindrical portion, the foot carried by the blade holder being adapt to travel over a surface of a flange placed, in use, on the base on rotation of the cutter  
20 support with the blade, having penetrated the flange cuts the flange in said circular path.

The blade itself will generally be a surgical steel blade which can be replaced when blunt but which will be initially sufficiently sharp to be suitable for  
25 repeated use. The blade holder will preferably be an enclosed housing retaining the blade in position with its tip above the sole of the foot until the foot which acts as a blade guard is driven back on forcing of the blade therethrough into the flange. Preferably the  
30 blade holder is mounted to the cutter support at two positions via radially directed limbs which extend through openings in the cutter support to enable the radius of cut to be varied as desired. As a patient will only normally need to set the radius once and will  
35 require such radius to be maintained steady in use, the lower surface of the lower limb is preferably engaged

by a screw which is driven through the central member from the underside thereof. In practice, the central member is a hollow cylindrical member in its lowermost part to allow a grub screw of sufficient length to be  
5 driven through a matching bore portion therein to engage the underside of the lower limb.

The foot is generally to be formed as a flat shoe able to undergo sliding travel over the surface of the plastics disc of a stoma flange without tracking  
10 occurring. The flange cutter of this invention may, with the exception of the blade and any holding screws be formed of injection moulded plastics material such as high impact polystyrene. It can thus be inexpensive to manufacture.

15 According to a further preferred embodiment of the invention, there is provided a flange cutter comprising a support member having an elongate channel formed therein and having an upstanding cylindrical portion at or adjacent one end thereof, and a cutting device  
20 comprising a cutter support adapted to engage said upstanding central cylindrical portion, surmounted by a handling portion and carrying a blade holder offset in relation thereto and carrying at the base thereof a foot with respect to which a surface of a flange placed  
25 in use on the base is able to undergo relative motion, the foot being formed with a slot sized to allow passage therethrough of a blade and being retractably connected to the blade holder via a compression spring, with the downward travel of the foot in association  
30 with the blade holder being limited by the flange with which it makes contact and further such travel being prevented by the compression of the spring so that the surface of the flange is able to travel under the foot when the blade has continued its downward travel to  
35 penetrate the flange, whereby rotation of the flange about the axis of said cylindrical portion causes a

circular cut to be made in the flange.

The construction of the blade and blade holder will generally be as described above. Because of the manner in which the blade engages the longitudinal slot  
5 in the base member and is not able to then rotate independently thereof, it is only necessary for a single radially directed limb to be utilised for mounting the blade holder to the cutter support. This single radially directed limb, passing through an  
10 opening in the cutter support, enables the radius of cut to be varied as desired.

According to a second aspect of the invention there is provided a method of providing a circular cut of predetermined radius in a laminar article initially  
15 provided with a starter hole of smaller radius which comprises placing the laminar article over the upstanding cylindrical portion of the base member of a flange cutter according to the present invention, the cutter support then being out of engagement with said  
20 upstanding cylindrical portion and the blade holder being offset with respect to the cutter support according to the desired radius of cut, bringing the cutter support into engagement with the upstanding cylindrical portion and in so doing bringing the foot  
25 of the blade carrier into contact with the upper surface of the laminar member, causing the blade to penetrate the laminar article as completion of said engagement takes place and the shoe is restrained by said article from further descent and retracted under  
30 the action of the spring and effecting relative motion between blade and laminar article to achieve said circular cut.

Once a radius of cut has been set, then the cutting device will be made ready for use simply by  
35 extending the cylindrical portion of the base member with respect to the cutting device and introducing the

base member into the opening in the flange to be cut. Return of the base member towards the cutter support with the blade in alignment with the longitudinal slot and suitable locking of the support against rotation  
5 with respect to the blade will provide an arrangement in which rotation of the flange against the cutting edge of the blade will enable the desired circular cut to be produced. In preferred practice, a locking device comprising a member displaceable at right angles  
10 to axis of the cutter support, mounted to the base member and engagable with the cutter support when displaced up thereto will provide the desired locking of the base member to the cutting device in the correct orientation with respect to the cutting blade.

15 In contrast to the cutting device of the first embodiment of the invention described above, rotation of the flange with respect to the shoe and the base member thereunder takes place slidably to produce the required circular cut without tracking occurring.

20 For a better understanding of the invention and to show how the same can be carried into effect, reference will now be made by way of example only to the accompanying drawings wherein:

FIGURE 1 is a perspective view of a stoma flange as supplied by its manufacturer;

FIGURE 2 is a perspective view of a stoma hole flange cutter embodying this invention;

FIGURE 3 is an elevation of the flange cutter with blade holder cover removed;

30 FIGURE 4 is an exploded view of the flange cutter of Figure 2;

FIGURE 5 is a plan view of a combined bag/stoma hole flange system;

35 FIGURE 6 is a perspective view of a further flange cutter embodying the invention;

FIGURE 7 is a rear elevation of the flange cutter

of Figure 6;

FIGURE 8 is a front elevation of the flange cutter of Figure 6, with blade holder cover removed; and

FIGURE 9 is a section through a device as shown in Figure 8 at IX-IX.

Referring to Figure 1, a typical proprietary stoma flange comprises a soft plastics disc 1 conventionally formed with a central opening 2 and having a flat base coated with adhesive and covered with a protective covering member 3 which is stripped away just before the flange is applied to the skin. Set in the opposite surface of the disc away from the outer periphery thereof is an annular coupling ring 4 whose outer periphery is shaped to enable a flexible waterproof bag (not shown) to be held thereon. Adhering to the upper surface of the disc and extending a considerable distance beyond the confines thereof is a flange 5 itself formed of a flexible dressing material and backed with a stripable protective layer 6 whose removal is assisted by the provision of cuts 7 therealong. In use, an opening sized to match that of a stoma will be cut in a central area 8 of the disc surrounding the opening 2 and, after removal of protective coverings on the flange and disc will be applied to the stoma with the opening slightly larger (by say 3mm) than and surrounding the stoma to accommodate eventual shrinking of the opening and the flange and disc will be pressed to the skin to adhere thereto ready for fixing the flexible waterproof bag to the coupling ring 4.

Turning next to Figures 2 to 4, the stoma flange hole cutter comprises a base 10 having a circular central recess 11 in which is fixed a circular disc support 12 whose outer diameter is matched to the size of stoma flange disc which is to be worked upon and which comprises a central recess 13 bounded internally

by a support wall 14 and externally by an annular rim 15 standing proud of the surface of the disc support. The diameter of the annular rim 15 is matched to the internal diameter of the holding ring of the flange disc in which a stoma matching hole is to be cut. Within the confines of the support wall 14 is an upstanding hollow cylindrical portion 16 which is a female member receiving a matching male member 17 constituted by the lowermost part of a rotatable element 18 comprised by a cutting device shown generally at 19.

The cutting device 19 comprises a blade carrier 20 offset with respect to the rotatable element 18. The blade carrier is connected to the rotatable element by means of radially directed upper and lower limbs 21 and 22 respectively which pass through matching openings 23 and 24 respectively in the rotatable element 18. The spacing of the blade carrier 20 from the rotatable element 18 and accordingly the eventual diameter of cut achievable with the arrangement is variable by appropriate displacement of the limbs through their openings. To enable a fixed diameter setting to be achieved for repeated use, the lower limb 22 has a flat section 26 for engagement by a 4 BA screw 27 passing through a central passage 28 in the lower part of the rotatable element 18. The blade carrier 20 houses a surgical blade 25 having an opening 29 therein which engages with an appropriately shaped projection 30 formed on the blade carrier 20 and extends into a shoe 31 which is itself capable of reciprocating motion through a slot 32 formed in the base of the blade carrier 20 under the action of a compression spring 33 having an associated restraining strap 33a. The shoe 31 is retained against loss from the blade carrier by means of a flange portion 34 at its head and carries a sole portion 35 which is sufficiently large to enable

the shoe to slide over a flange at which a cut is to be made without tracking therein. A narrow slot 36 extends the length of the shoe and is occupied by the cutting portion 37 of the blade which when the spring  
5 is not compressed and the shoe is at its lowermost position lies entirely within the shoe. A marking 31a on the shoe 31 indicates the position of the blade and is of value when the blade is out of view in enabling the cutting radius which has been set to be checked  
10 precisely.

In screw-threaded engagement with the top of the rotatable element 18 is a hand wheel 38 which is in screw-threaded engagement with the rotatable element. The diameter of the lower end of the rotatable element  
15 18 is matched to the internal diameter of the upstanding hollow cylindrical portion 16 of the base so that a friction fit is achieved between the two which nevertheless allows rotation of the rotatable element without hindrance when inserted in the hollow  
20 cylindrical portion 16. A cover member 39 is attached to the blade carrier 20 at a location above the blade itself by means of a screw 40 passing through the blade carrier 20 and into the upper limb 21 with which it engages. Removal of the cover enables the blade to be  
25 easily changed. The upper limb's movement is restricted by an end cap 41 fixed to the free end thereof.

To achieve a cut using the device of this invention, it is simply necessary for the cutting  
30 device 19 to be removed from engagement with the base 10. A flange is then placed over the base whose hollow cylindrical portion 16 then extends through the central opening 2. The flange remains steady on the base owing to the matching of the internal diameter of the  
35 coupling ring 4 to the external diameter of the annular rim 15 on the base. The cutting device 19 with the



radial separation of the blade from the longitudinal axis of the rotatable element 18 set to a value, as required, less than the internal diameter of the annular rim 15 is then brought up to the base and the rotatable element 18 is inserted in the hollow cylindrical portion 16 and pushed downwardly until the shoe 31 is pushed upwardly against the tension in the spring 33 and the blade then penetrates the plastics material of the disc 1. Rotation of the handling portion 38 in a direction determined by the orientation of the forward cutting edge of the blade 25 results in the blade cutting through the disc 1 to provide an opening therein of the required diameter. During the cutting operation, it is not necessary for any covering material to have been removed from the disc or its flange. The blade cuts through the covering member 8. When the covering member 3 and the portion of the stripable protective layer 6 between the cuts 7 are removed, the flange is ready for use. The remainder of the protective layer 6 may be removed subsequently having enabled the flange to be handled while being placed on a stoma.

Referring next to Figure 5, a one-piece stoma hole flange system comprises a bag 51 formed by welding a lower sheet of plastics material 52 to an upper sheet of plastics material 53 at their edges. The upper sheet 53 has a soft plastics flange 54 adhesively connected to the exterior thereof. The flange is adhesively coated and the adhesive coating is protected by a peelable sheet 55 of card. A starter hole 56 extends through upper sheet 53, flange 54 and card 55. This starter hole will generally have a diameter of 10 to 15 mm. The hole generally has to be extended in diameter before removal of the protective card and application of the flange to the area around a stoma. A flange cutter according to a further embodiment of

the invention is appropriate to the cutting of such enlarged hole.

Thus referring to Figures 6 to 9 of the drawings in which like reference numerals denote like parts in  
5 Figures 2 to 4, the stoma cutter comprises a base element 100 which incorporates an elongate support 110 having a longitudinal recess 111 in the upper surface thereof. Extending upwardly from a cylindrical body  
10 portion 112 at one end of the base is a solid cylindrical portion 113 which acts as a male member entering a hollow cylindrical portion 114 constituting the lower part of a cutter support 115 which constitutes part of a flange cutter shown generally at 116. The flange  
15 cutter 116 and the base are separable from one another and may be connected in a manner which will be described in further detail subsequently.

The flange cutter 116 comprises a blade carrier 20  
whose construction is almost identical with that shown in Figure 4 and which is offset with respect to the  
20 cutter support 115. The blade carrier is connected to the cutter support by means of a single limb 21 which passes through matching opening 23 in the cutter support 115. The spacing of the blade carrier from the  
25 cut achievable with the arrangement is variable by appropriate displacement of the limb 21 through the opening 23. The upper part of the cutter support 115, including that traversed by the limb 21 is hollow and above the limb 21 there is internal threading which is  
30 engaged by threading 117 carried by a central cylindrical projection 118 of a large handling portion 38. The projection 118 bites against the limb 21 when the large handling portion is screwed down as far as it  
35 will go, to operate in the manner of a grub screw to hold the limb 21 in the desired radius setting. The construction of the blade carrier 20 itself, the shoe

31 associated therewith and the operation of the blade are as previously described.

As previously mentioned, the base 100 is separable from the flange cutter 116. Mounted to the central  
5 cylindrical body 112 and diametrically opposite to the base 110 is a slide support 120 which carries on its upper surface a channel member 121 through which travels a locking member 122 which is a flat element formed with parallel projections 123 defining  
10 therebetween a rectangular recess 124. The solid cylindrical portion 113 is formed at a position opposite that of the locking member 122 with a pair of parallel flat surfaces 125 whose spacing apart is less than the spacing apart of opposite walls of the  
15 rectangular recess. The upper surface of the locking member 122 carries a push element 126 which has an upstanding handling portion 127 which allows ready manipulation of the locking member 122 for movement thereof in either the forward or reverse direction.  
20 The push element 126 also carries a disk 128 which identifies the diameter of the central cylindrical body 112 so that at a glance it can be seen with what size of one-piece stoma flange system the cutter device is to be used. The hollow cylindrical portion 114 of the  
25 cutter support is formed with parallel passages 129 therethrough space apart by the same distance as that separating flat surfaces 125.

To achieve a cut using the device of Figures 6 to 9, it is simply necessary for the solid cylindrical  
30 portion 113 associated with the base 100 to be out of complete engagement with the hollow cylindrical portion 114 of the cutter support. For this purpose, the push element 126 must be in its retracted position with the parallel projections 123 of the locking member out of  
35 engagement with the flat surfaces 125 and out of engagement with the parallel passages 129 at the rear

of the hollow cylindrical portion 114 of the cutter support 115. The elongate base 110 can then be introduced into the interior of a bag 51 so that the central cylindrical body 112 occupies the starter hole 56 therein. The sole portion 35 of the shoe 31 will then be out of contact with the base 100 with the blade carrier being at its position of maximum extension. As the spacing between base 110 and sole portion 35 is reduced on entry of the solid cylindrical portion 113 into the hollow cylindrical portion 114 with alignment of shoe 31 and the longitudinal slot 111 being assisted by the provision of keying surface 130 on the solid cylindrical portion 113 abutting against a corresponding surface in the interior of the hollow cylindrical portion 114, the sole portion 35 comes to lie on the upper surface of the sheet 55 of protective card and as the solid cylindrical portion 113 is pushed into the passages 120 in the hollow cylindrical portion 114 to the maximum extent, the shoe 31 is retracted under the action of spring 33 to expose blade 25 which then cuts through sheet 55, soft plastics flange 54 and upper sheet 53 before entering the longitudinal slot 111. A marking 31a on the side of shoe 31 indicates the position of the blade so that the cutting radius which is set can be checked in relation to the position on the sheet 55 at which a cut is to be made.

The base 100 is then locked into position by pushing forward the locking member 122 for its parallel projections 123 to pass through the parallel passages 129 and engage the parallel flat surfaces 125 formed on the solid cylindrical portion 113. The base 100 is now stabilised with respect to the flange cutter 116 and cutting of a circular hole in components 53, 54 and 55 of the one-piece stoma flange system is achieved by rotation of the bag 51 in a direction against the cutting edge of the blade 25. On completion of the

desired circular cut, the locking member 122 is retracted, base 100 is separated from the flange cutter 116 and the flange system, with surplus material cut out therefrom, is ready for use. It is simply then  
5 necessary to strip off the remaining sheet 55 from the soft plastics flange 54 before the flange is presented to the stoma.

Claims:

1. A flange cutter comprising a base member formed with a channel therein and having an upstanding cylindrical portion, and a cutting device comprising a  
5 cutter support adapted to engage said upstanding cylindrical portion and surmounted by a handling portion and carrying a blade holder off-set in relation thereto, the blade holder carrying at the base thereof a foot for emplacement over a surface of a flange  
10 placed, in use, on the base, the foot being formed with a slot sized to allow passage therethrough of the blade, and being retractably connected to the blade holder via a compression spring, with the downward travel of the foot in association with the blade holder  
15 being limited by the flange with which it makes contact and further such travel being prevented by the compression of the spring so that the foot lies over the surface of the flange when the blade has continued its downward travel to penetrate the flange whereby  
20 relative rotational motion between flange and blade achieves a circular cut through the flange by the blade, which cut is centred at the axis of said cylindrical portion.
2. A flange cutter as claimed in claim 1, wherein the  
25 cutter support is rotatable in relation to said central cylindrical portion, the foot carried by the blade holder being adapt to travel over a surface of a flange placed, in use, on the base on rotation of the cutter support with the blade, having penetrated the flange  
30 cuts the flange in said circular path.
3. A flange cutter comprising a support member having an elongate channel formed therein and having an upstanding cylindrical portion at or adjacent one end thereof, and a cutting device comprising a cutter  
35 support adapted to engage said upstanding cylindrical portion, surmounted by a handling portion and carrying

a blade holder offset in relation thereto and carrying at the base thereof a foot with respect to which a surface of a flange placed in use on the base is able to undergo relative motion, the foot being formed with  
5 a slot sized to allow passage therethrough of a blade and being retractably connected to the blade holder via a compression spring, with the downward travel of the foot in association with the blade holder being limited by the flange with which it makes contact and further  
10 such travel being prevented by the compression of the spring so that the surface of the flange is able to travel under the foot when the blade has continued its downward travel to penetrate the flange, whereby rotation of the flange about the axis of said  
15 cylindrical portion causes a circular cut to be made in the flange.

4. A flange cutter according to claim 3, wherein the support member is elongated and sufficiently narrow to enter a circular opening in a laminar article of  
20 smaller radius than any said circular cut.

5. A flange cutter according to claim 3 or 4, wherein the upstanding cylindrical portion of the support member and said central cylindrical portion so engage that rotation of one with respect to the other is  
25 prevented.

6. A flange cutter according to claim 1 or 2, wherein the blade holder is mounted to the cutter support at two positions via radially directed limbs which extend through openings in the cutter support to enable the  
30 radius of cut to be varied as desired.

7. A flange cutter according to claim 6, wherein the upstanding cylindrical portion is hollow in its lowermost part, which part includes a screw threaded passage housing a screw of sufficient length to be  
35 driven therethrough to engage the underside of the lower said limb to provide a radius setting of the

flange cutter.

8. A flange cutter as claimed in claim 3, 4 or 5, comprising means for achieving locking of the base support against rotation with respect to the blade.

5 9. A flange cutter according to claim 8, wherein the locking means comprises a member displacement at right angles to the longitudinal axis of the cutter support, mounted to the base member and engagable with the cutter support to restrain said rotation when engaged  
10 with the cutter support.

10. A flange cutter according to any preceding claim, carrying an index mark on the shoe, visible on engagement of the flange with the blade and at a like distance from the longitudinal axis of the cylindrical  
15 portion of the cutting device as the blade.

11. A flange cutter according to any preceding claim, wherein the handling portion is a hand wheel engaging one end of the cutter support.

12. A flange cutter, substantially as hereinbefore  
20 described with reference to, and as shown in, Figures 2 to 4 or Figures 6 to 9 of the accompanying drawings.

13. A method of providing a circular cut of predetermined radius in a laminar article initially provided with a starter hole of smaller radius which  
25 comprises placing the laminar article over the upstanding cylindrical portion of the base member of a flange cutter as claimed in any preceding claim, the cutter support then being out of engagement with said upstanding cylindrical portion and the blade holder  
30 being offset with respect to the cutter support according to the desired radius of cut, bringing the cutter support into engagement with the upstanding cylindrical portion and in so doing bringing the foot of the blade carrier into contact with the upper  
35 surface of the laminar member, causing the blade to penetrate the laminar article as completion of said



engagement takes place and the shoe is restrained by said article from further descent and retracted under the action of the spring and effecting relative motion between blade and laminar article to achieve said  
5 circular cut.

14. A method as claimed in claim 13, wherein the laminar article is a stoma adhesive seal.

15. A method as claimed in claim 13, wherein the flange cutter is a flange cutter as defined in claims 3  
10 and 4 and the laminar article is the combination of a soft plastics flange and one wall adhered thereto of a bag of one-piece stoma hole flange system, wall and flange having coinciding starter holes through which the support member can be passed to lie in the  
15 interior of a bag and wherein said circular cut is achieved by rotating the bag with flange attached about the axis of said cylindrical portion with the blade penetrating the flange.

16. A method of providing a circular cut of  
20 predetermined radius in a laminar article, substantially as hereinbefore described with reference to Figures 2 to 4 or Figures 6 to 9 of the accompanying drawings.